

retained the name of *Megalonyx*, and used it in a generic sense, Cuvier offered no characters whereby other fossil remains might be generically either distinguished from, or identified with the *Megalonyx Jeffersonii*, unless, among such remains there happened to be a tooth, or a claw exactly corresponding with the descriptions and figures in the *Ossemens Fossiles*; and when, of course, a specific identity, and not merely a generic relationship would be established.

The greater part of Cuvier's chapter on *Megalonyx* is devoted to the beautiful and justly celebrated reasoning on the ungual phalanx, whereby it is proved to belong, not to a gigantic Carnivore of the Lion-kind, as Jefferson supposed, but to the less formidable order of Edentate quadrupeds; and Cuvier, in reference to the tooth,—the part on which alone a generic character could have been founded,—merely observes that it resembles at least as much the teeth of one of the great Armadillos, as it does those of the Sloths.*

In the last edition of the *Régne Animal*, Cuvier introduces the *Megatherium* and *Megalonyx*, between the Sloths and Armadillos; but alludes to no other difference between the two genera than that of size,—“l'autre, le *Megalonyx*, est un peu moindre.” (p. 226.) Some systematic naturalists, as Desmarest, and Fischer, have, therefore, suppressed the genus, and made the *Megalonyx* a species of *Megatherium* under the name of *Megatherium Jeffersonii*. The dental characters of the genus *Megatherium* are laid down by Fischer† as follows:—“*Dent. prim. et lan. 3. molares 4-4, obducti, tritores, coronide nunc planâ transversim sulcatâ nunc medio excavatâ marginibus prominulis.*” That *Megalonyx* had the same number of molares as *Megatherium*, (supposing that number in the Megathere to be correctly stated, which it is not,) is here assumed from analogy, for neither Jefferson, Wistar, nor Cuvier,—the authorities for *Megalonyx* quoted by Fischer—possessed other means of knowing the dentition of that animal than were afforded by the fragment of a single tooth.

Now the almost entire lower jaw about to be described offers, in so far as respects the general form and structure of the teeth, the same kind and degree of correspondence with the *Megatherium*, as does the *Megalonyx Jeffersonii* of Cuvier: and, what is only probable in that species, is here certain, viz., an agreement with the *Megatherium* in the class, viz. *molares*, to which the teeth exclusively belong. The question, therefore, on which I find myself, in the outset, called upon to come to a decision is, as to the preference of the mode of viewing the subject of the generic relationship of the *Megalonyx* adopted by Desmarest, Fischer, &c., or of that, on which Cuvier, and after him Dr. Harlan, have practically acted: whether, in short, the genus *Megatherium* is to rest upon the more

* Speaking of this tooth, Cuvier observes, “Je l'avois cru d'abord nécessairement de *pareseux*; mais aujourd'hui que je connois mieux l'ostéologie des divers tatous, je trouve qu'elle ressemble au moins autant à une dent de l'un des grands *tatous*.—Loc. cit. p. 172.

† Synopsis Mammalium.

comprehensive characters of kind and general structure of the teeth, or upon the more restricted ones, of form and such modifications in the disposition and proportions of the component textures of the tooth, as give rise to the characteristic appearances of the triturating surface of the crown.

With respect to existing Mammalia, most naturalists of the present day seem to be unanimous as to the convenience at least of founding a generic or sub-generic distinction on well marked modifications in the form and structure of the teeth, although they may correspond in number and kind, in proof of which it needs only to peruse the pages of a *Systema Mammalium* which relate to the distribution of the Rodent Order. According to this mode of viewing the logical abstractions under which species are grouped together, the extinct Edentate Mammal discovered by Jefferson must be referred to a genus distinct from *Megatherium*, and for which the term *Megalonyx* should be retained. This will be sufficiently evident by comparing the descriptions given by Cuvier of one of the teeth of the *Megalonyx Jeffersonii*, and by Dr. Harlan of a tooth of his *Megalonyx laqueatus*, with those of the *Megatherium* which have been published by Mr. Clift. The fragment of the molar tooth of the *Megalonyx Jeffersonii*, described and figured in the *Ossemens Fossiles*, seems to have been implanted in the jaw, like the teeth of the *Megatherium*, by a simple hollow base similar in form and size to the protruded crown: its structure Cuvier describes as consisting of a central cylinder of bone enveloped in a sheath of enamel.* The transverse section of this tooth presents an irregular elliptical form, the external contour being gently and uniformly convex, the internal one, undulating; convex in the middle, and slightly concave on each side, arising from the tooth being traversed longitudinally on its inner side by two wide and shallow depressions.

The imperfect tooth of the species called by Dr. Harlan *Megalonyx laqueatus*, and of which a cast was presented by that able and industrious naturalist to the Museum of the Royal College of Surgeons, resembles in general form, and especially in the characteristic double longitudinal groove on the inner side, the tooth of the *Megalonyx Jeffersonii*. It is thus described by Dr. Harlan:

“The fractured molar tooth appears to have belonged to the inferior maxilla on the right side; the crown is destroyed; a part of the cavity of the root remains. The body is compressed transversely, and presents a double curvature, which renders its anterior and exterior aspects slightly convex; the posterior and interior gently concave; these surfaces are all uniform, with the exception of the interior or mesial aspect, which presents a longitudinal rib or ridge, one-half the thickness of the long diameter of the tooth; with a broad, not profound longitudinal

* It is most probable that the substance which is here termed “enamel,” is similar to that which forms the dense prominent ridges in the tooth of the *Megatherium*, and which I have shown to be composed of minute parallel calcigerous tubes, similar to the ivory or bone of the human tooth.